

ABSTRACT OF THE DISCLOSURE

An airfoil temperature control arrangement includes a resistive heater element. A plurality of detectors allow a controller to gather resistance information at various intervals along the resistive heater element. Determining the resistance of the corresponding portions of the heater element allows the controller to utilize a known relationship between resistance and temperature for the material selected to make the resistive heater element. In one example, a nickel alloy or other material having a high coefficient of resistance is chosen to provide the controller with the ability to determine a temperature for each portion of the heater element. The determined temperature information is used, for example, to monitor whether any portion of the heater element has become delaminated from the airfoil surface.

N:\Clients\HAMILTON SUNDSTRAND\IP00069\PATENT\Application.doc